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09/474,025	12/28/1999	OK MOON KWAK	K139	1762

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EXAMINER

EMDADI, KAMRAN

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/474,025

Applicant(s)

KWAK ET AL.

Examiner

Kamran Emdadi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 1999.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Regarding claim 4, the phrase: “the control data to the signaling circuit, and multiples and transmits a user data” is indefinite for two reasons.

- The term multiples has no relation to claim 2 and furthermore is incorrect grammar following the context of the sentence.
- The user data does not follow from the control data mentioned before it and the move from control data to user data is indefinite, perhaps a correction to the multiples will clarify the process of transmitting a user data.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 2, 6, 7, 10, 11, and 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Raychaudhuri et al. (US Patent No. 5638371).

- Regarding claim 1, Raychaudhuri teaches: an ATM communication device in direct communication with a base station 46 that handles ATM translation through a multiplexing AT M unit 82 coupled to a processor CPU 84 used for control signaling, in bi-directional communication with another wireless device via a radio link (Figure 3), the switch and CPU are coupled to allow the wireless base station to communicate to other base stations (Col 6, lines 5-9) and a MAC processing unit for the base station and the remote station 100 and 104 respectively that handles bi-directional channel signaling and control signaling (Figure 4), where an ATM cell is the basic unit of data within the wireless network (Col 4, lines 55-58), VC multiplexing unit (Col 5, lines 34-46) a modem used for modulating signals as a basic part of the ATM network (Col 6, lines 55-60), MAC layer protocol providing ATM services of CBR, VBR and ABR.
- Regarding claim 2, Raychaudhuri teaches: all of the above embodiments and a virtual channel being controlled by a processor 102 (Col 6, lines 19-34).
- Regarding claim 6, Raychaudhuri teaches: all of the above embodiments and multiplexing downstream data streams and uplink streams (Col 14, lines 39-45) and it is inherent for multiplexing streams in one direction to have a demultiplexer operating to handle the multiplexed streams for the bi-directional nature of this embodiment.

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- Regarding claims 7, 10, and 11 Raychaudhuri teaches: a MAC processor associated with the virtual channel designation and a MAC protocol for controlling the designation of bandwidth to include CBR, ABR and VBR bandwidth designations (Col 6, lines 15-20 and 65-67).
- Regarding claima 14-17, Raychaudhuri teaches: all of the above embodiments and a virtual channels (Col 5, lines 30-42), physical mediums and wireless access media and wireless media control between users and controlling stations (Col 5, lines 45-55), protocol communications between main unit and (Col 6, lines 5-25).
- Regarding claims 18 and 19, Raychaudhuri teaches: a (VPI/VCI) used for identification purposes (Col 4, lines 60-64).
- Regarding claims 20, 21, and 24, Raychaudhuri teaches: all of the above embodiments and multiplexing downstream data streams and uplink streams (Col 14, lines 39-45) and it is inherent for multiplexing streams in one direction to have a demultiplexer operating to handle the multiplexed streams for the bi-directional nature of this embodiment, virtual channel being controlled by a processor 102 (Col 6, lines 19-34).
- Regarding claim 22, Raychaudhuri teaches: all of the above embodiments and an error control process 286 (Figure 8) and a process of segmenting and assembling packets (Figures 9-11) and based on user requirements 278 (Figure 12).
- Regarding claim 23, Raychaudhuri teaches: all of the above embodiments and a time slot allocation for user access (Col 11, lines 12-17).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 12, 13, and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri (US Patent No. 5638371) in view of Jaakkola et al. (US Patent No. 6356537).

- Regarding claims 3, 12, 13, 25 and 31 Raychaudhuri teaches: all of the above embodiments and a fiber optic medium as a standard for conformance regarding the integration of wireless and broadband, but does not teach: a frequency conversion process having an intermediate frequency change to a lower than before frequency level, and a combiner and divider device to act upon the intermediate frequency. Jaakkola et al. teaches: an ATM wireless networking system, with a combiner/splitter 90 that acts on the IF signal, a up-conversion and down-conversion process of increasing a signal and lowering a signal (Col 6, lines 14-35) and the lowering of a frequency (Col 6, lines 52-57). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the use of a down and up conversion of a signal frequency to correlate with the functionality of a modem used by the disclosed inventions.
- Regarding claims 26-28, Raychaudhuri teaches: all of the above embodiments.

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- Regarding claim 29, it is an inherent feature of a digital signal processor to multiply a signal as taught above by a processor manipulating the data and forwarding it to an external device to the processor.
  - Regarding claim 30, it is an inherent feature of a routing device to route information based upon the routing information in this case ATM uses VCI as mentioned above.
7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri (US Patent No. 5638371) in view of Pasternak et al. (US Patent No. 5936949).
- Regarding claim 5, Raychaudhuri teaches: all of the above embodiments except a record of the users kept in each base station or central controlling server.  
  
Pasternak teaches: an ATM wireless networking system to include protocol concatenation to include the MAC protocol (Figure 20) and a Service Access Point SAP 1900 carrying user data based on the services offered regarding connectivity (Col 11, lines 41-49). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the profiles of users into the base stations of the Raychaudhuri embodiment, to more readily expose the users requirements based on the ATM cell switching service categories common to both these inventions: CBR, VBR etc.
8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri (US Patent No. 5638371) in view of McHale et al. (US Patent No. 5905781).

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- Regarding claim 8, Raychaudhuri teaches: all of the above embodiments except a Permanent Virtual Circuit (PVC) and a Switched Virtual Circuit (SVC). McHale teaches: an ATM and Ethernet compatible network to include the MAC protocol (Figure 17) and a SVC or PVC connection made at a customer site an access server at another network site (Col 26, lines 48-53). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of a PVC or SVC connection as a commonly used VC type connection associated with ATM connections between sites on a network.
- Regarding claim 9, Raychaudhuri teaches: teaches CBR, ABR or VBR as an available bandwidth option (Cols 6 and 7, lines 65-67 and 1-5).

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - Yin et al. (US Patent No. 6490251) Protocol translation in a network.
  - Dighe et al. (US Patent No. 5717691) ATM interface communication system.
  - Kobayashi et al. (US Patent No. 5825766) Switching network.
  - Kiriama (US Patent No. 5561466) ATM video/audio data multiplexing.
  - Hokari (US Patent No. 5987025) ATM relay system.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamran Emdadi whose telephone number is (703)



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305-4899. The examiner can normally be reached between the hours of 8am and 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached at (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Kamran Emdadi

03/25/2003

KWANG BIN YAO  
PRIMARY EXAMINER  
